

NEW ABSTRACT

A device for generating radiation by an excimer discharge includes an at least partly UV-transparent discharge vessel. The discharge chamber is filled with a gas filling. At least one electrode is provided for igniting and maintaining the excimer discharge in the discharge chamber which also includes a coating of a light-emitting compound. The light-emitting compound has the following composition: $(\text{Ca}_{1-x-2y}\text{Sr}_x)\text{Li}_2\text{Si}_{1-z}\text{Ge}_2\text{O}_4:\text{Ln}_y\text{M}_z$, where Ln is a cation selected from the group Ce^{3+} , Pr^{3+} , Sm^{3+} , Eu^{3+} , Gd^{3+} , Tb^{3+} , Dy^{3+} , Er^{3+} , Tm^{3+} and Yb^{3+} ; and M is a cation selected from the group Na^+ , K^+ and Rb^+ , $0 \leq x \leq 0.1$, $0.001 \leq y \leq 0.2$ and $0 \leq z \leq 1$.